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ABSTRACT

Integrated Pest Management (IPM), a decision-making approach to pest control, is designed to help individuals decide if pest suppression treatments are necessary, when they should be initiated, where they should be applied, and what strategy and mix of tactics to use. IPM combines a variety of approaches with which to manage pests. These include human behavior changes, habitat modification, physical controls, biological control agents, and least-toxic chemical controls. Using these techniques, an IPM program maintains the size of a pest population at or below an acceptable level. In addition, the amount of toxic material put into the environment is kept as small as possible. This packet of materials graphically teaches K-6 students the basics of an IPM mouse control program. The packet consists of a bulletin board (which students help assemble), an informative (and entertaining) take-home booklet, and several reinforcing activities. Designed to fit easily into any teacher's schedule, the materials can be presented as a separate program or as a supplement to studies in language arts, science, or health. (JN)

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The Case of the Wild House Mouse

ED238699

Urban Pest Management

Teaching Environmental Living Skills to Elementary Students

by Kathleen Letcher Cowles

Illustrated by Jean Pajot Smith

Produced by the John Muir Institute
with funds provided by the
Charles Stewart Mott Foundation

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2

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URBAN PEST MANAGEMENT

Teaching Environmental Living Skills
to Elementary Students

"The Case of the Wild House Mouse"

Kathleen Letcher Cowles

Illustrated by Jean Pajot Smith

Produced by
The John Muir Institute for Environmental Studies, Inc.

These materials made possible by a grant from
the Charles Stewart Mott Foundation, Flint MI

SE043074

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These materials have been produced as part of an urban pest management program developed under the directorship of William and Helen Olkowski.

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The Case Of The Wild House Mouse

Introduction

Every city (and rural) resident has to deal with a variety of pests in daily life. Even people whose homes are clean and well-maintained often have weevils in the flour, roaches in the cupboards and mice in the basement. Professional exterminators may make frequent visits, but the pests remain troublesome. Unfortunately, few people ever receive any scientifically-based training on how to control these pests. Pesticide sprays often seem the only "solution", but often are accompanied by the undesirable side-effects of acute or chronic poisoning and pests that eventually become resistant to the pesticide.

Another method of controlling these pests is **Integrated Pest Management** (IPM). As the name implies, IPM is a method of managing pests that combines a variety of approaches, including human behavior changes, habitat modification, physical controls, and least-toxic chemical controls. The purpose of an IPM program is to keep the size of the pest population at or below an acceptable limit while minimizing the amount of toxic material put into the environment.

IPM is a simple, common-sense approach to pest control -- one does not need to be an "expert" to understand it or to teach it. But it does need to be taught to the students of today if we are to have healthy and pleasant cities in the future.

This packet of educational materials graphically teaches K-6 students the basics of an IPM mouse control program. The packet consists of a bulletin board (which the children help assemble), an informative (and entertaining) take-home booklet, and several reinforcing activities. Designed to fit easily into any teacher's schedule, the materials can be presented as a separate program or as a supplement to studies in Language Arts, Science or Health.

We hope that you and your students enjoy following "The Case of the Wild House Mouse" together. An expanded packet that presents an IPM program for controlling cockroaches is also available from the John Muir Institute. (This program includes eight lesson plans, a color filmstrip, and an annotated bibliography.)

To order more "Wild House Mouse" take-home booklets or materials from the cockroach packet, please use the order form located at the end of this packet.

MOUSE BULLETIN BOARD

INSTRUCTIONS

1) Make several copies of each of the eleven enclosed pictures (so that there are enough pictures to distribute at least one to each child in the class).

2) Hand out one picture to each child for coloring (optional).

3) Assemble the Bulletin Board (using the pictures that the children have colored) as shown in the enclosed layout sketch. Attach pictures in the order shown on the sketch, then draw a "mouse tail" to connect the pictures (as shown).

4) Other "mouse work" can be displayed on the lower right hand corner of the board.

5) Be creative and have fun!

WANT TO GET THE MICE

The Case

OUT OF YOUR

of the

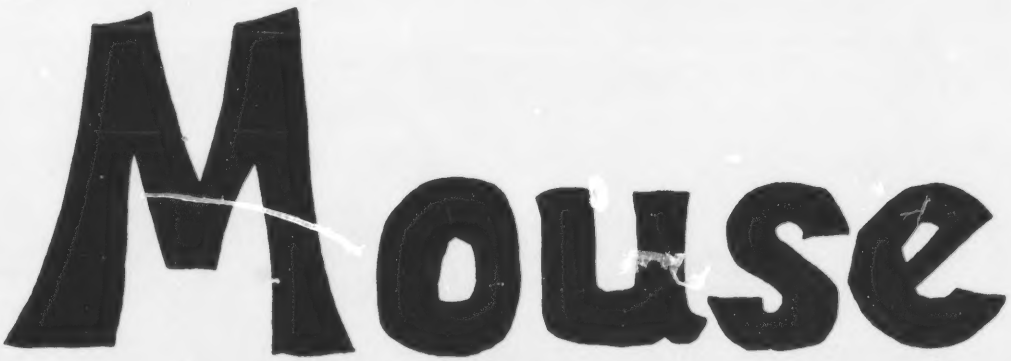
HOUSE? THEN COME ALONG AND

Wild House

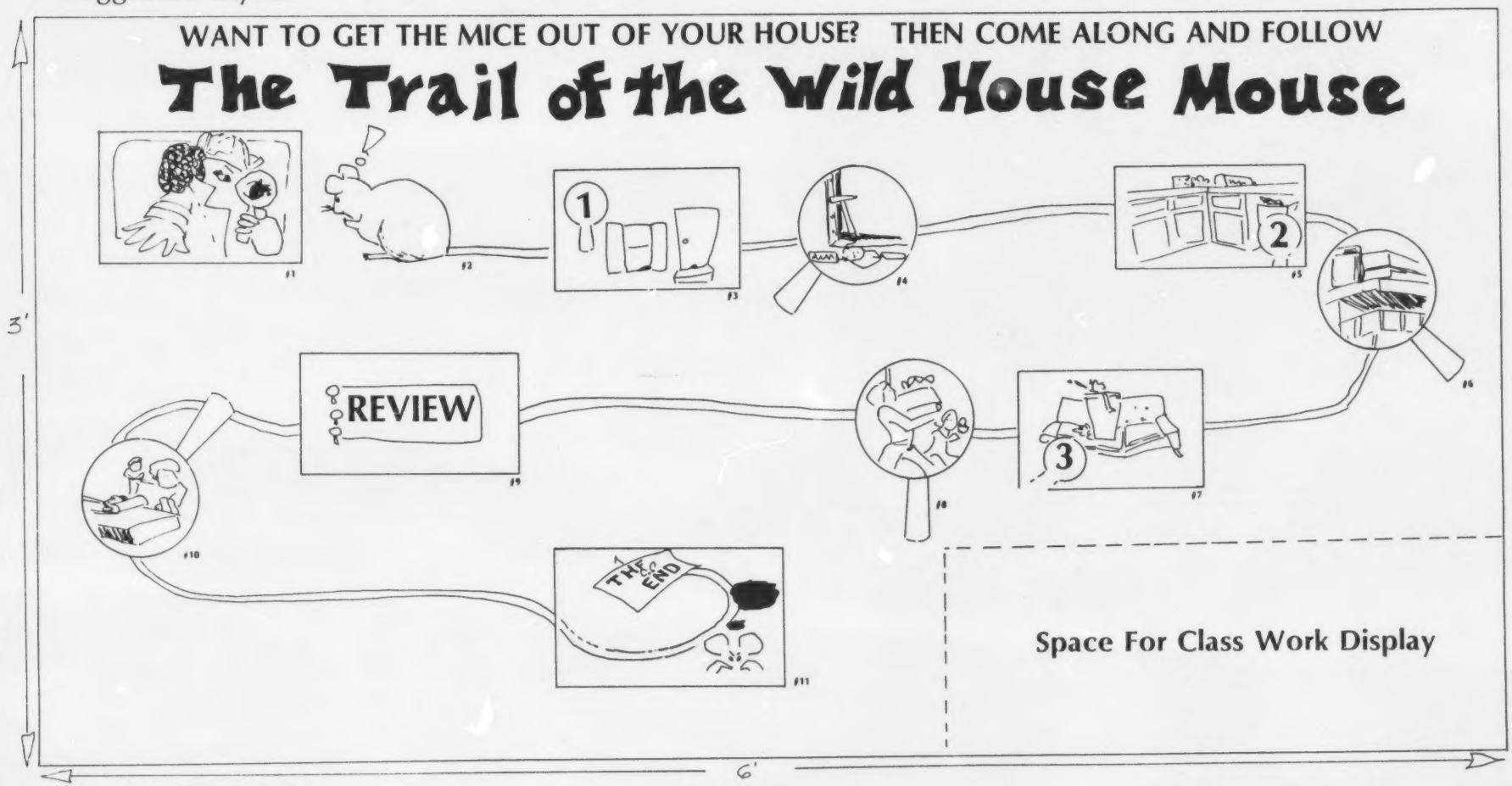
11

12

FOLLOW



Mouse Bulletin Board
Suggested Layout



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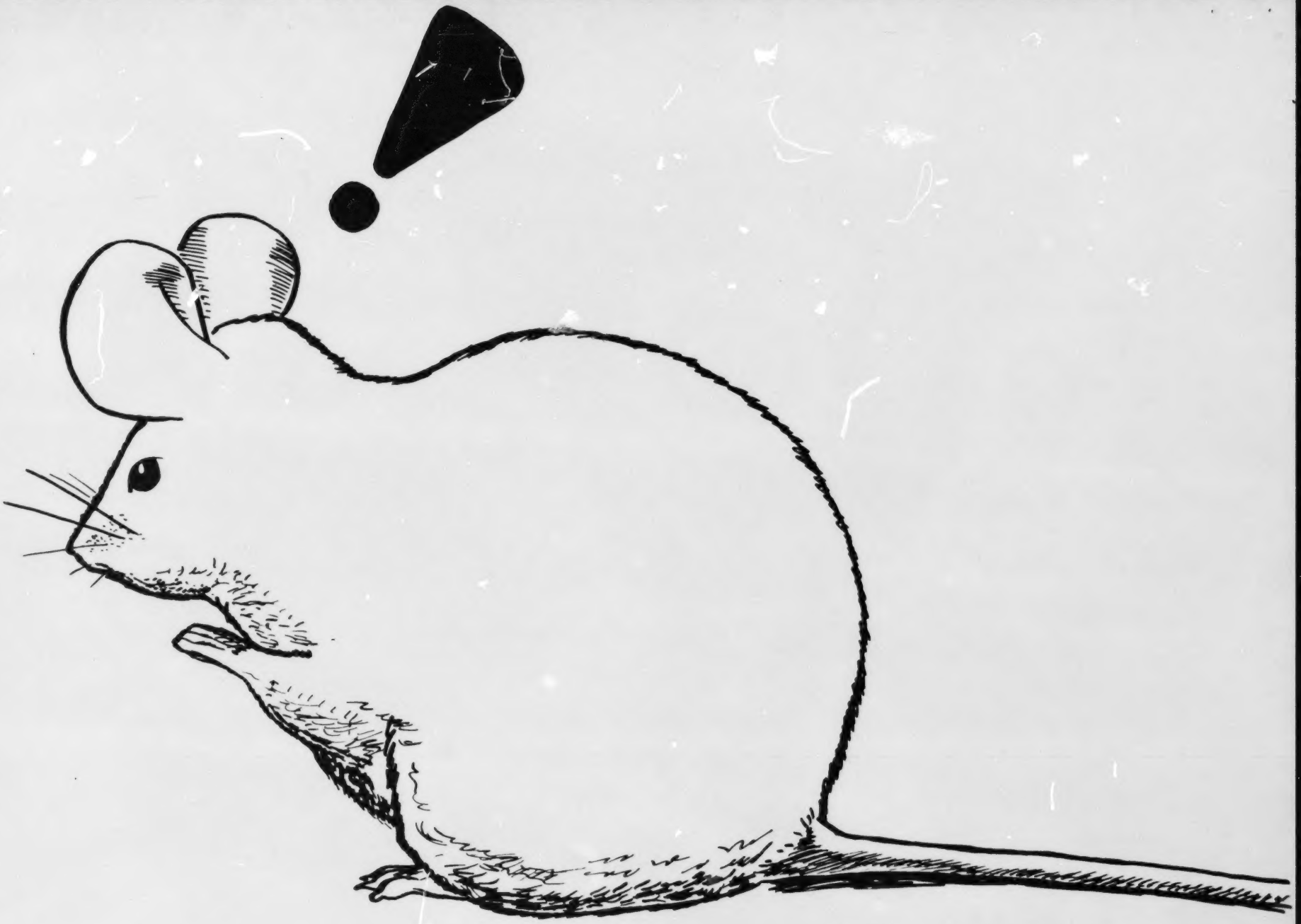
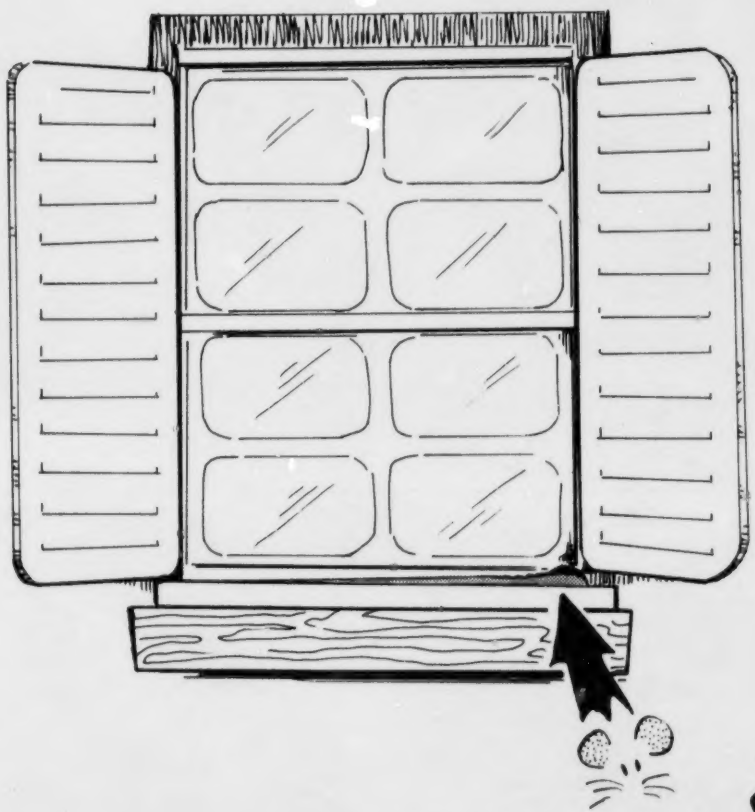
16

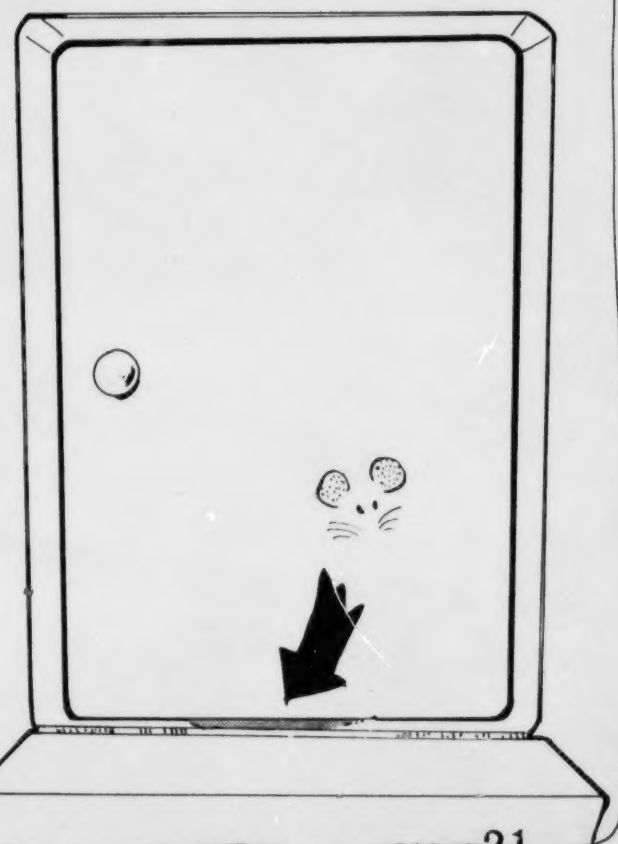
17

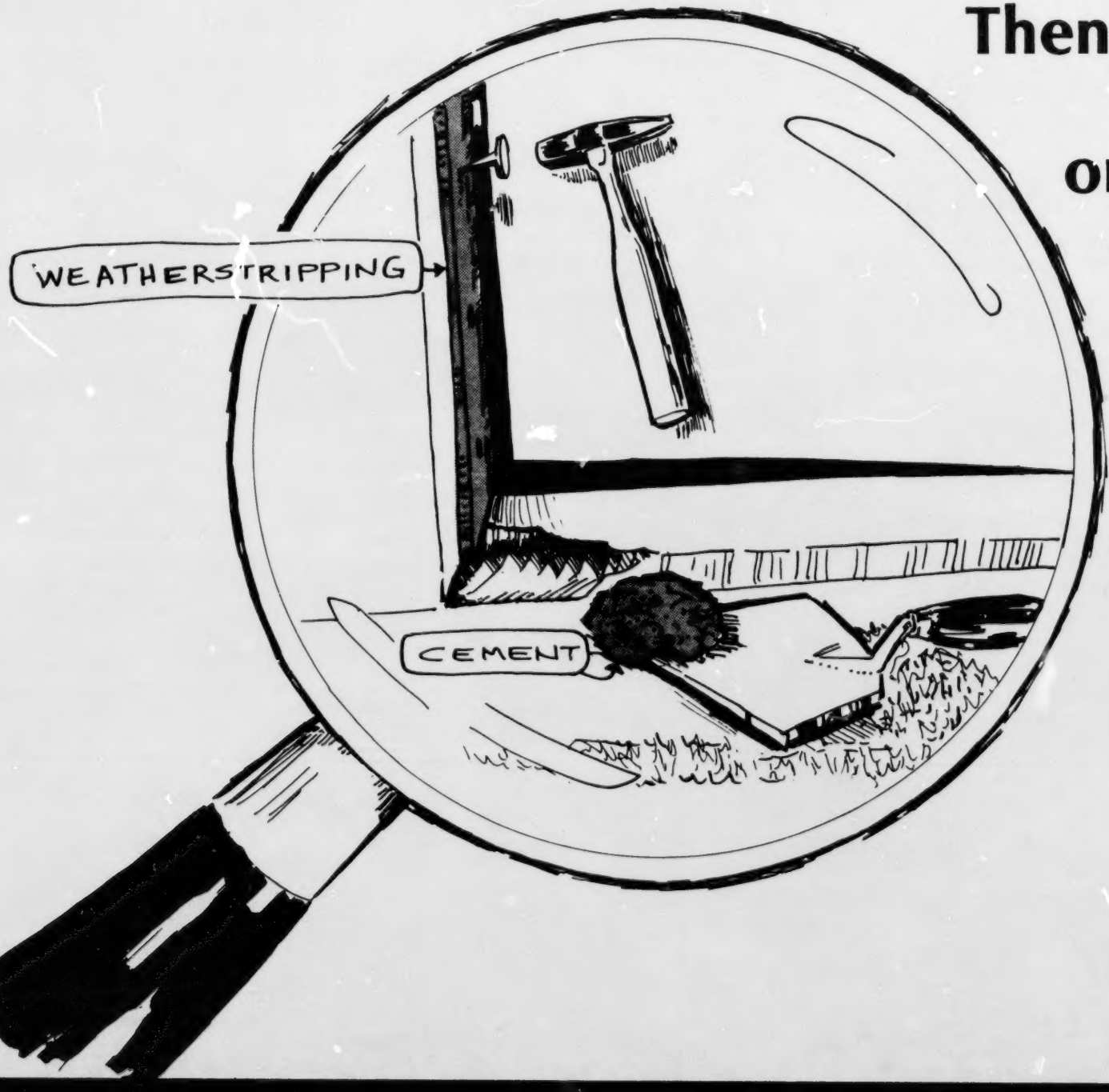
#1



1 LOOK FOR HOLES INTO YOUR HOUSE





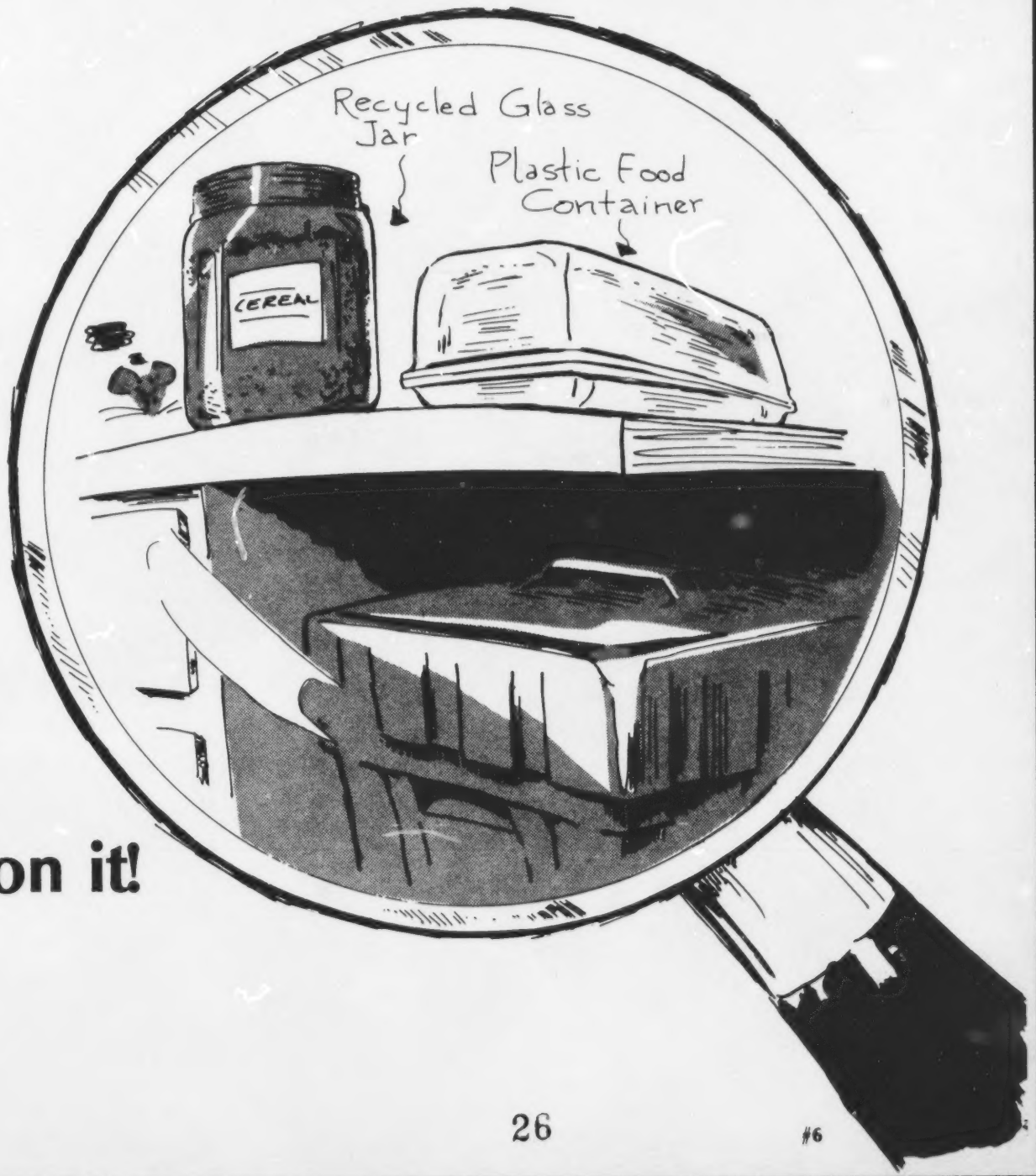


Then PATCH

or FILL

them to keep the mice OUT

LOOK FOR THE FOOD YOU ARE FEEDING THE MICE



Then, Put a LID on it!

3

LOOK FOR MOUSE HOMES IN YOUR HOUSE

AND CLEAN THEM OUT!

Now That You Have ...

Patched **Holes** Into Your Home

Removed Mouse **Food**

Removed Mouse **Homes**

. . . It's Time To Bring This Tale To A Close.

TRAP

The Mice That Are Left!

The End
Of
The Case of the
Wild House Mouse

The Case of the

Wild House Mouse

by Kathleen Letcher Cowles
Illustrated by Jean Pajot Smith

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WITH FUNDS PROVIDED BY THE CHARLES STEWART MOTT FOUNDATION

Is there a

in your house?

Or maybe 2 ... 3 ... 4 ... or 5?

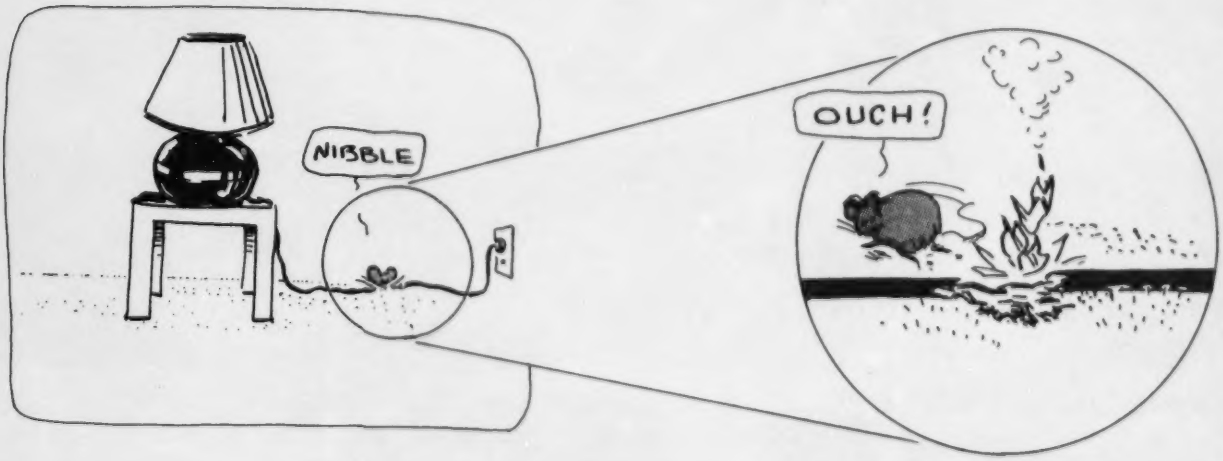
Even if he looks cute,

a wild mouse doesn't belong in your house.

They can and do:

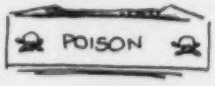
Spread Diseases

Spoil Your Food

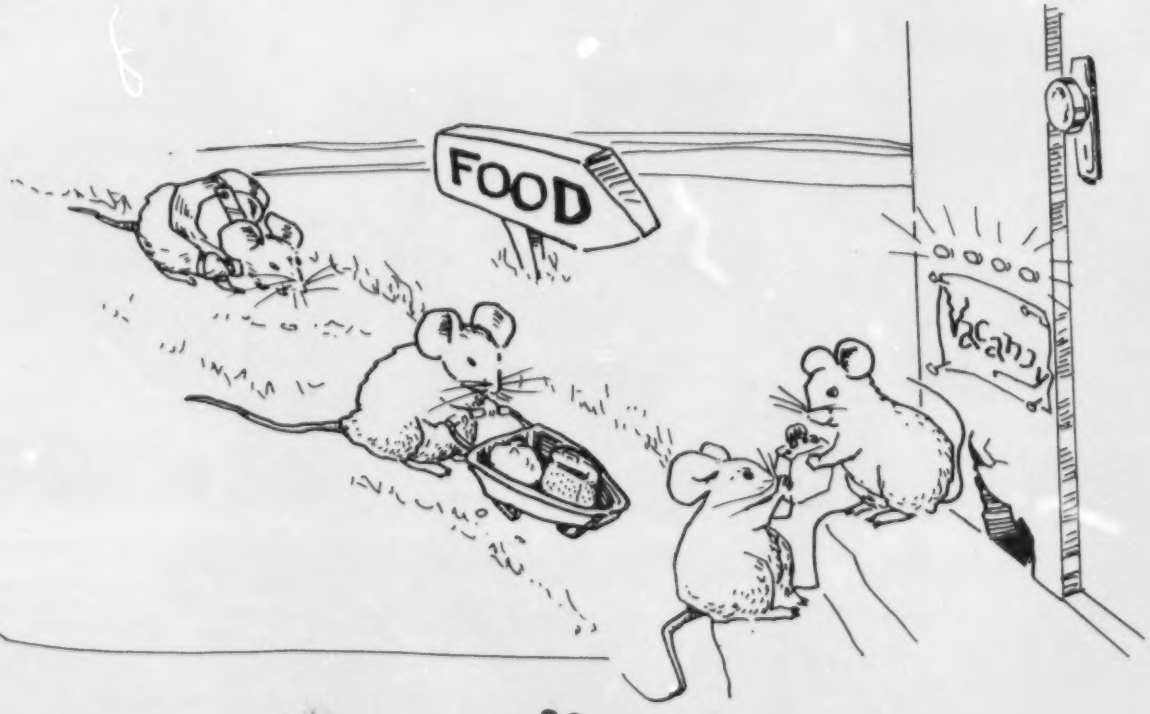


Cause Fires by nibbling on electrical wires.

BUT, getting a mouse out of your house isn't easy! Mice are often smart enough to not eat poisons set out for them!



And as long as they can get into **your** home and eat **your** food, new mice will always be coming in!



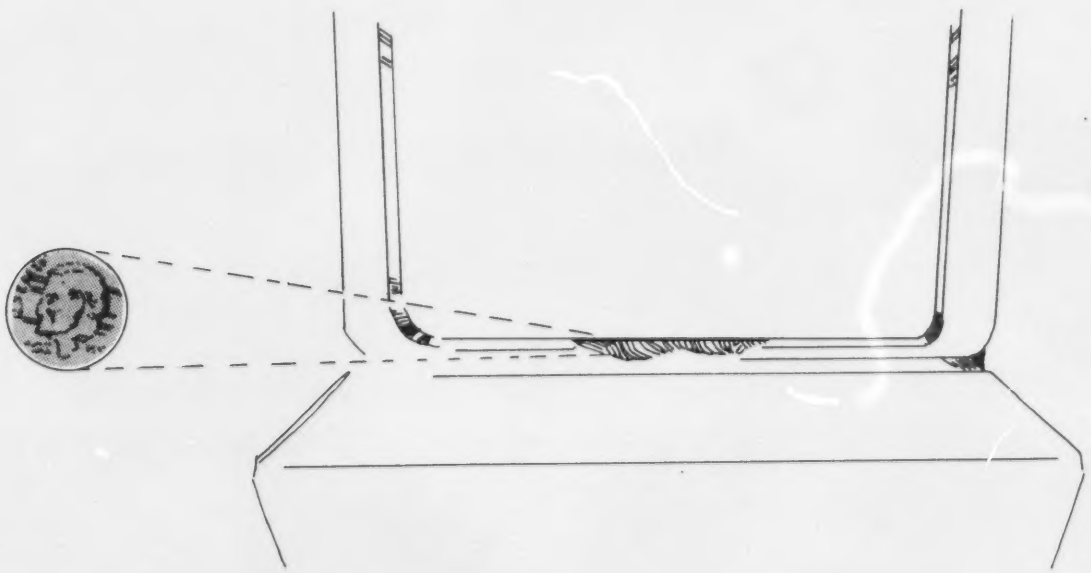
If there is a mouse in your house, you need to ask . . .
WHY IS THERE A MOUSE IN MY HOUSE?
. . . And that's where the Case begins!

Clue #1

The mouse got into your house from outside,
So there must be a hole in your house.

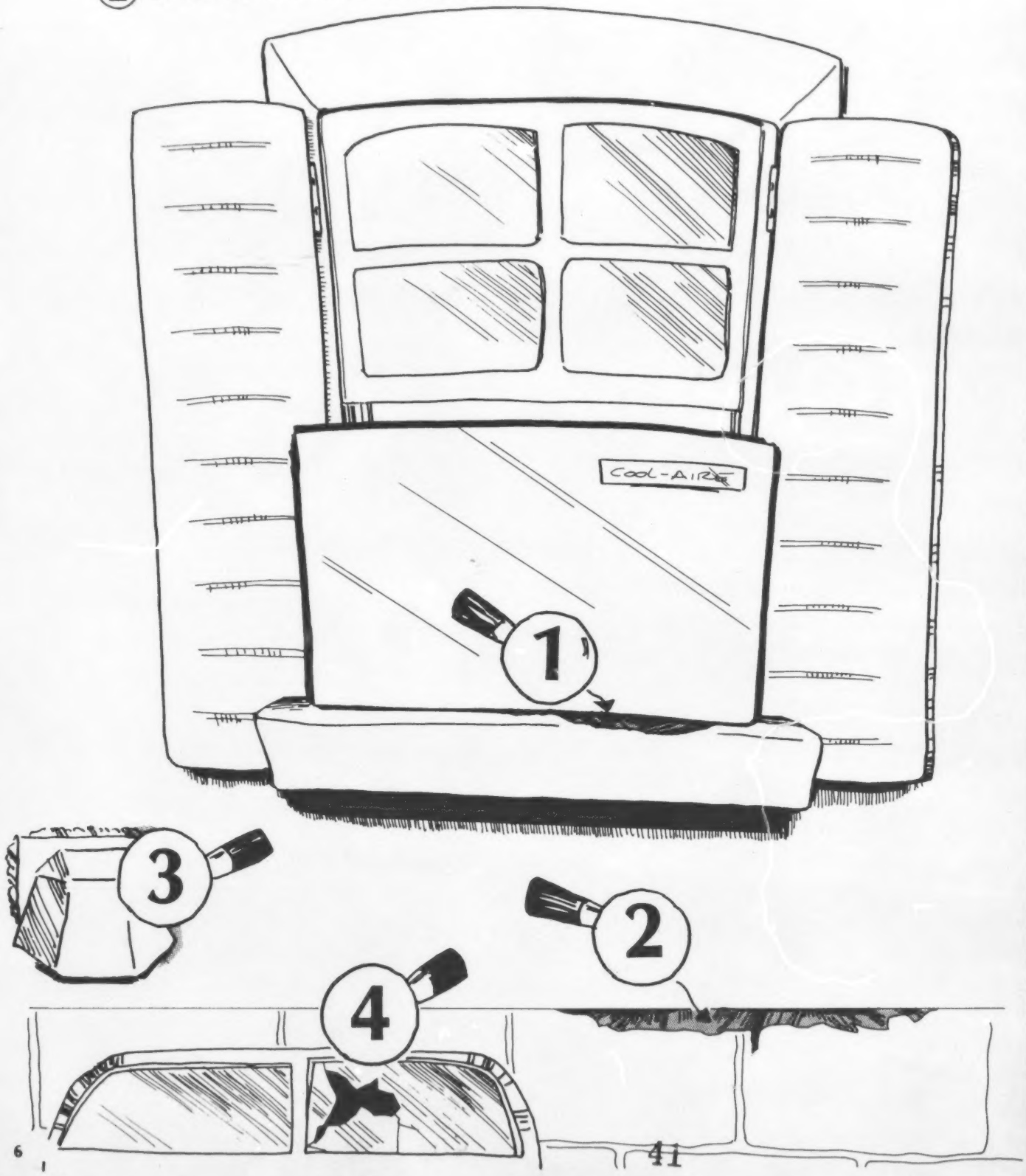
My first job will be to go on a HOLE HUNT to find the holes that need to be plugged up!

Look for little holes, too. A mouse can fit through a crack – the size of a dime!

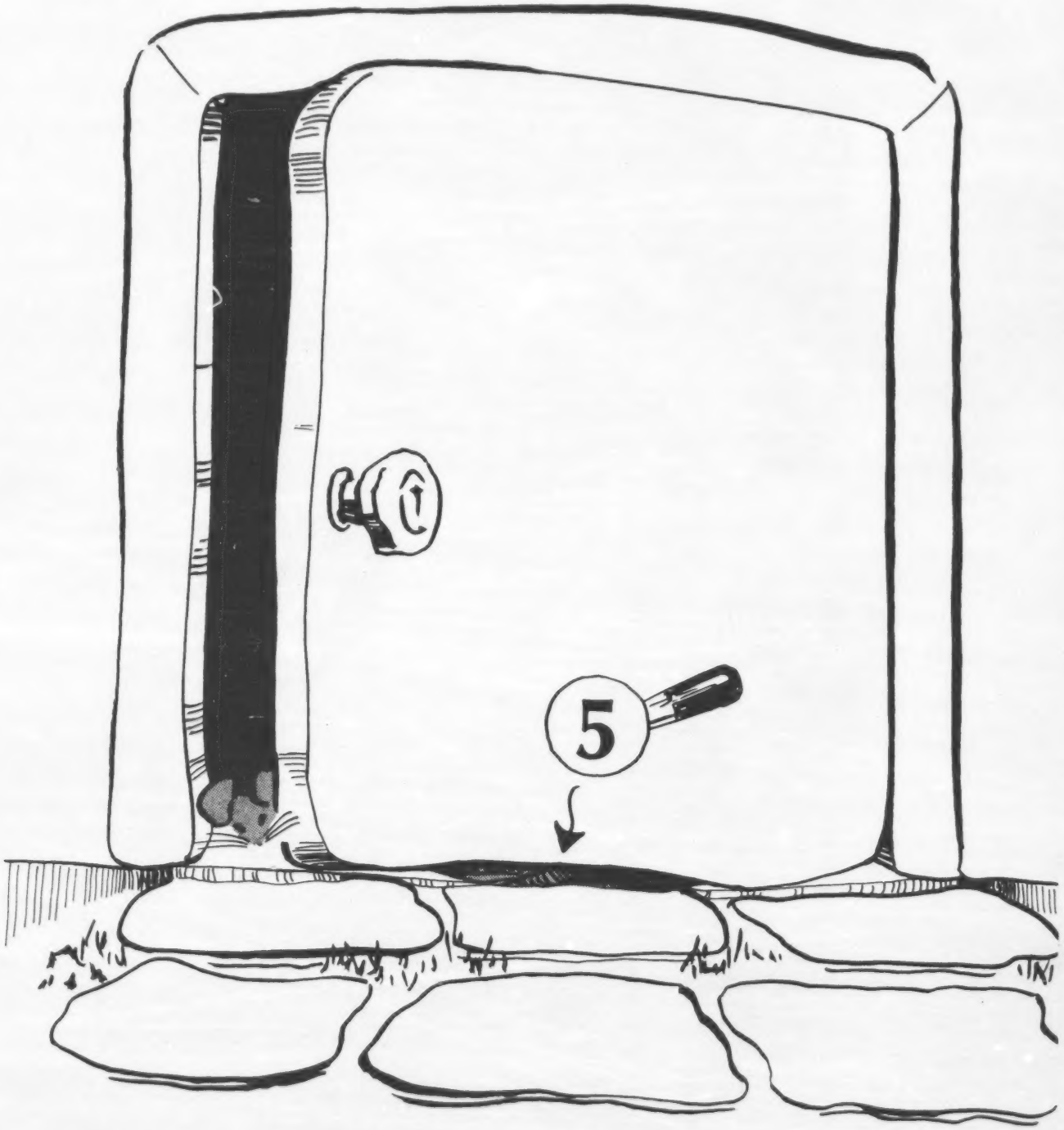


Places to look especially hard for holes:

① cracks around window or air conditioner
② cracks in the foundation



③uncaulked or open dryer vent
④broken or open basement window
⑤crack along bottom of door
(pet doors, too!)



Clue #2

The mouse has been finding food to eat inside your house!

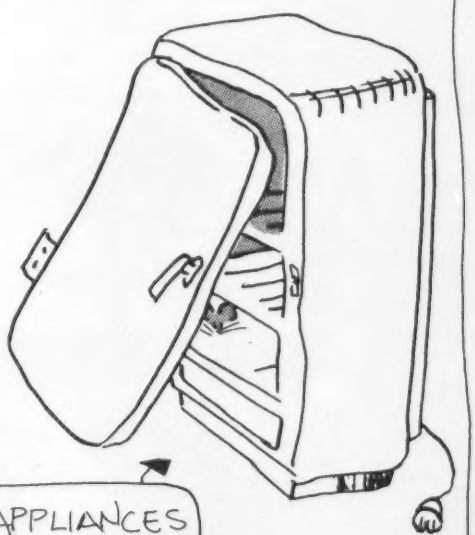
Mice don't need much food to stay alive and they eat many different things.

Clue #3

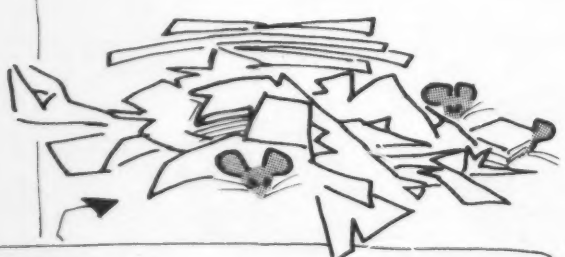
The mouse has found a comfortable place to live inside your house!

MICE
Where could live in **your** house?

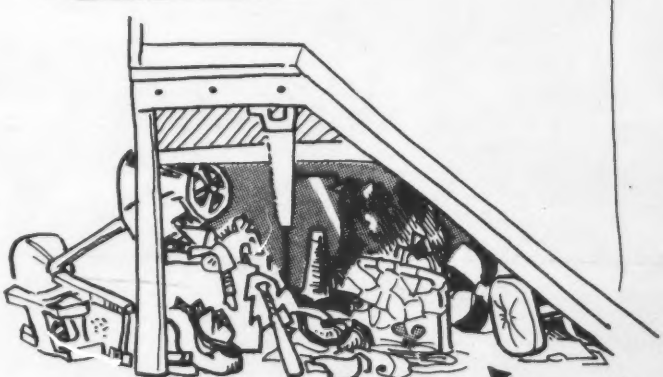
DISCARDED, OLD FURNITURE



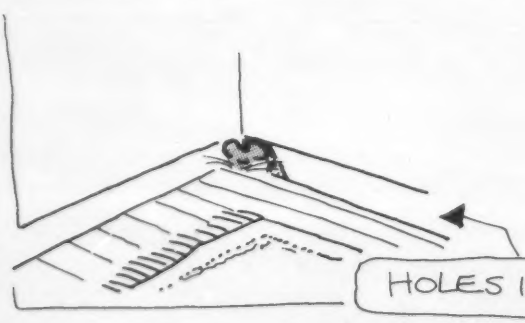
AND APPLIANCES



MOUNDS OF OLD NEWSPAPERS OR CLOTHING



CLUTTERED BASEMENTS OR CLOSETS



HOLES IN WALLS

Look for mouse hiding places near the outside of your house, too!

CIRCLE

The "Mouse Motels" in this picture.

45

Now, let's go over those clues one more time

We found the holes and cracks that mice use to get into your house.

We found their food.

We found their living places.

Now – How do we get this WILD HOUSE MOUSE **OUT** of the house?

Let's go back through the house and take away the things that invite the mice into live with you!

1st **Keep** them **out** of your house.

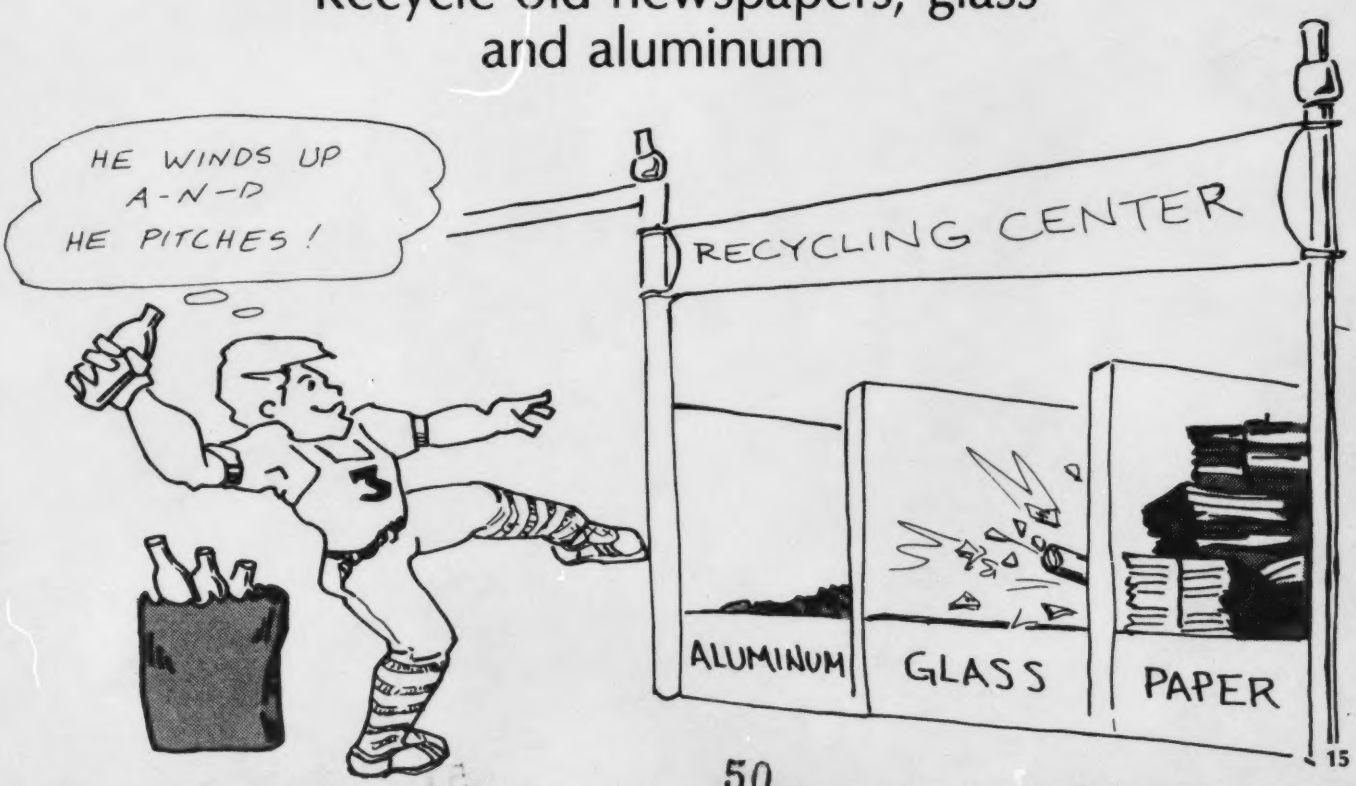
* Fill holes and cracks with caulk, weather stripping or patching material

(This helps keep your heat in, too)

* By storing all food in tightly lidded containers or in the refrigerator.

* Separate organic (food) garbage from inorganic (non-food) trash and store in a tightly lidded container. (A metal one is best.)

* Recycle old newspapers, glass and aluminum



* Feed your pet no more than it can eat right away.

(and then wash out the bowl.)

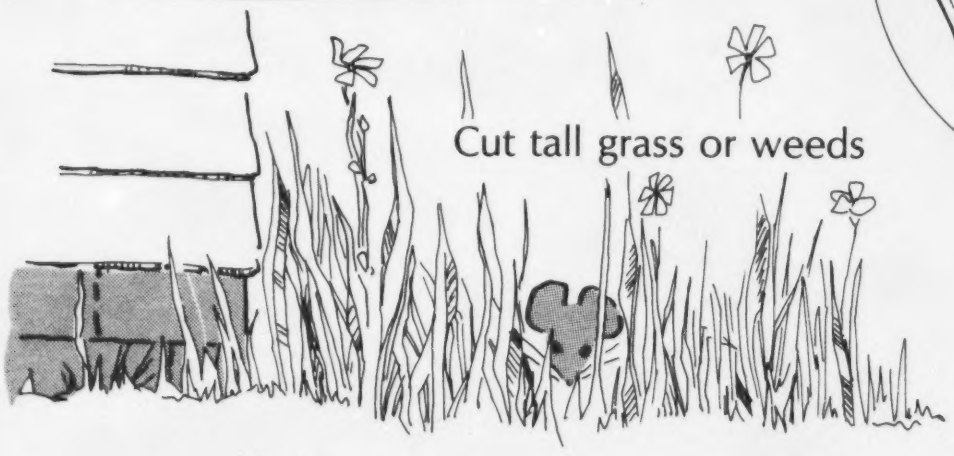
3rd Take away mouse living places!

* Patch holes

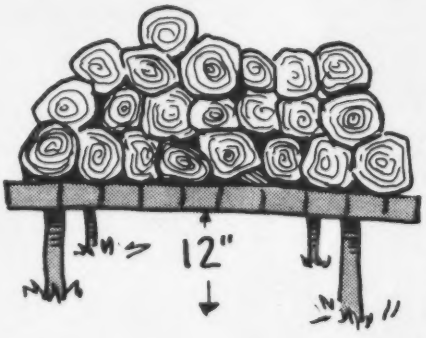
* Remove clutter

Take away their living places near your house as well . . .

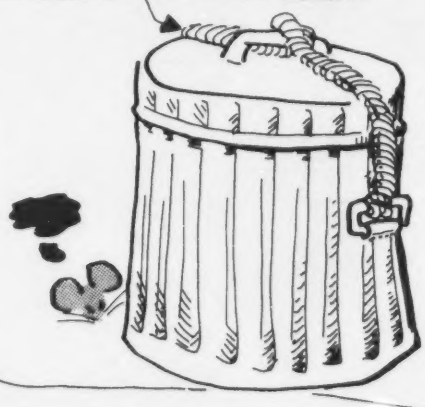
Cut tall grass or weeds



Raise woodpiles



GARBAGE LID FASTENER



Cover garbage cans tightly

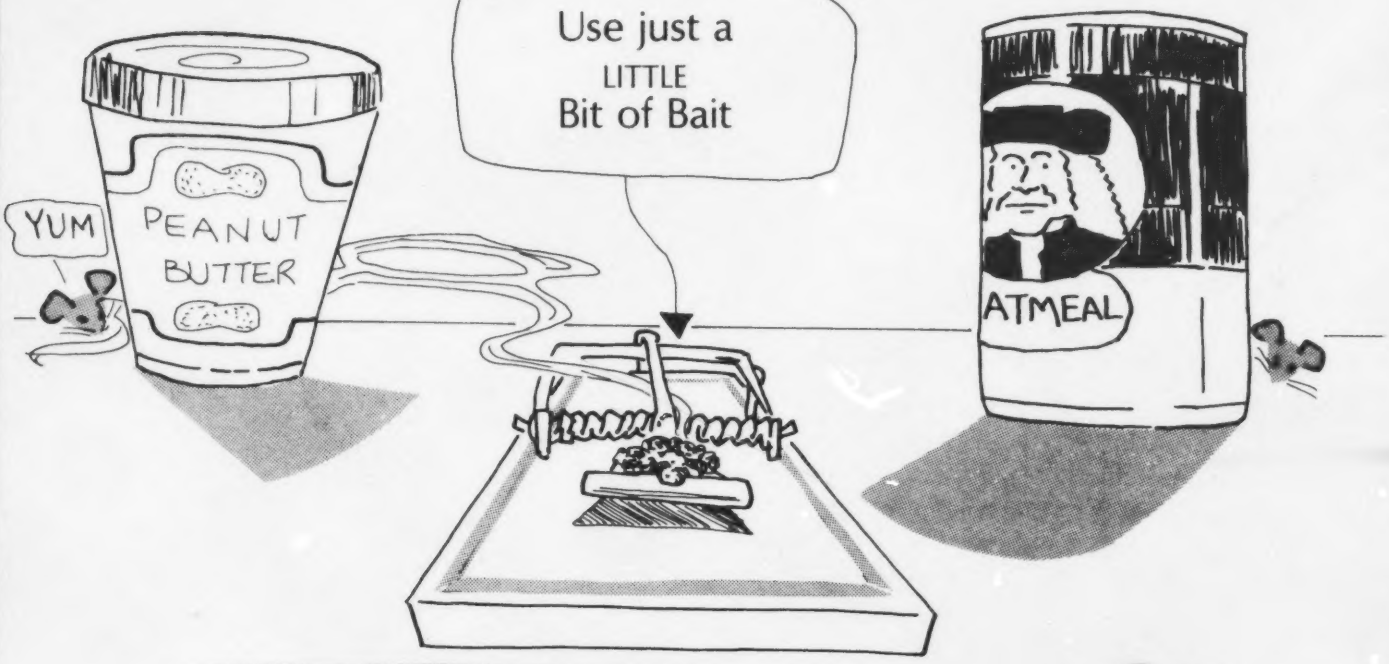
And clean-up that clutter in the garage!

4th

Trap the mice that haven't already left!

(So that they won't just keep making more mice)

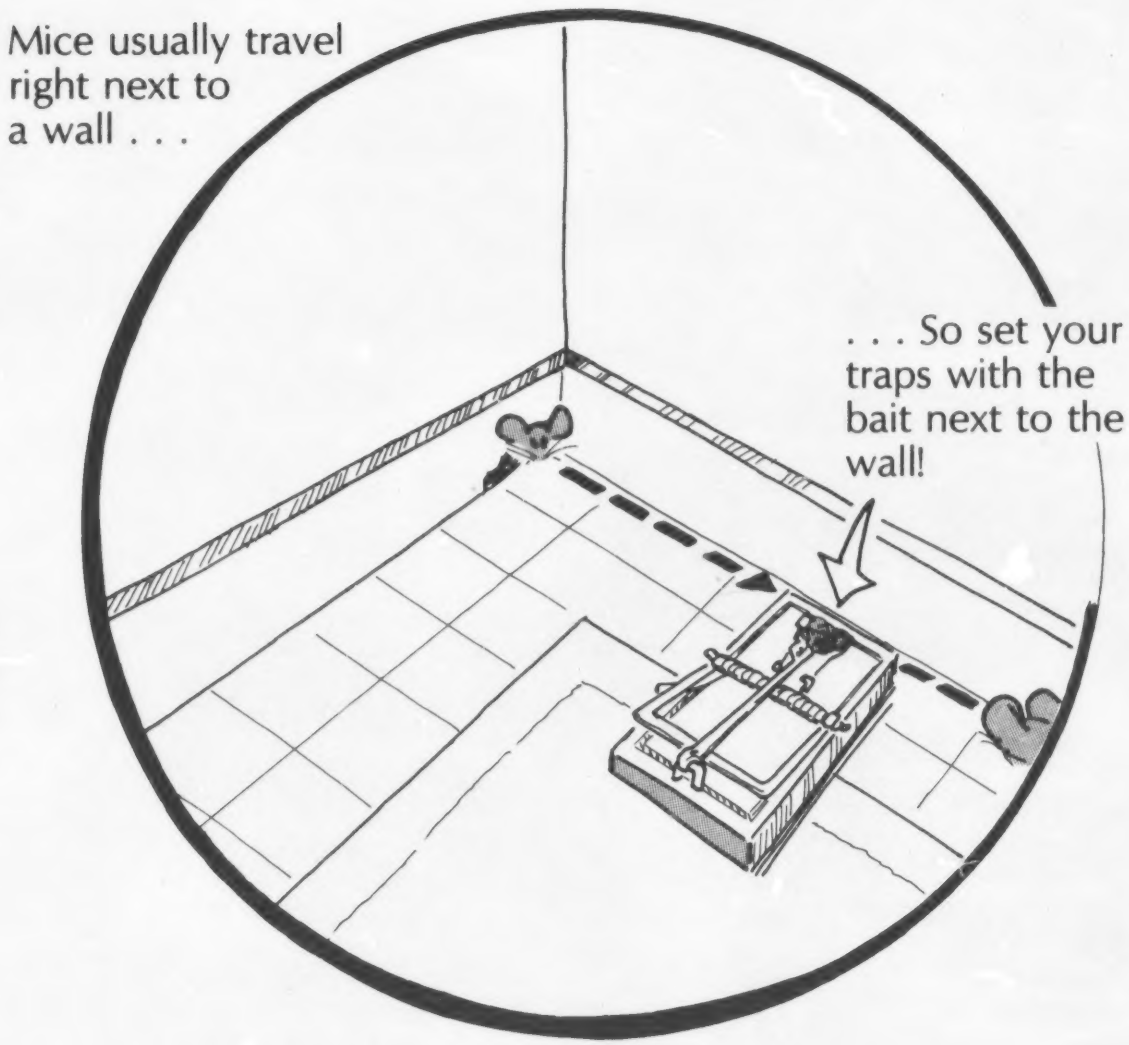
Use just a LITTLE Bit of Bait



Peanut Butter (uncooked) Oatmeal Are A Mouse's Favorite Food!

Watch to find out where the mice have been hiding and then ask your parents to set mouse traps there

Set 4 or 5 traps wherever mice have been seen.



(that way you'll catch mice coming from either direction!)

Your parents can dispose of the dead mouse by placing it in the garbage pail or flushing it down the toilet.

The Solution *to the*

Case of the Wild House Mouse

1. Keep mice out of your house by patching **holes.**

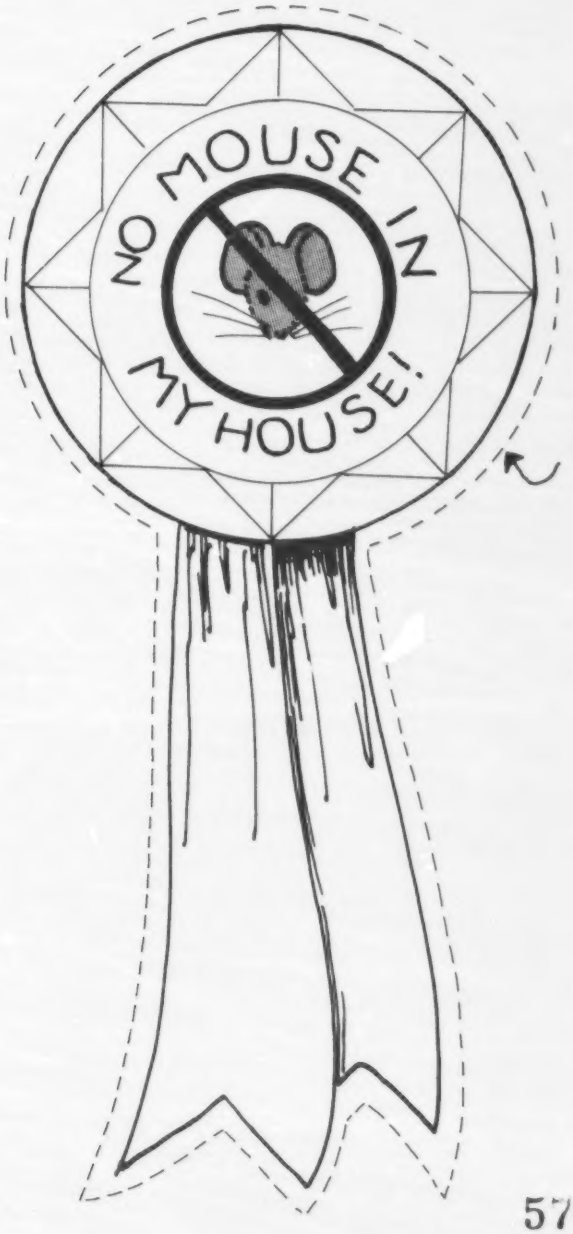
2. Take away their **food** inside of your house.

3. Take away their **living places** inside and near your house.

4. **Trap** the mice that haven't already left.

You Deserve A Medal!

* When you get rid of the mice in **your** house, cut this medal out and pin it on your shirt or bookbag. (you can color it first!)



Cut Along Dotted Line

MOUSE ACTIVITIES

INSTRUCTIONS

The next three pages contain reproducible handouts that can be copied and distributed to the students to reinforce the information contained in the Take-Home Booklet and Bulletin Board.

* **Magnifying Glasses**

Each of these "glasses" illustrates a key factor in mouse control: food, living places and entrances into the building. Make a number of copies of the page with the three magnifying glasses and distribute them to the students. Have the students color and cut out the "glasses."
- Take the students (and their completed glasses) on a tour of the school. Help them to identify potential sources of rodent food, living places, and access into the building.
- Tape the appropriate magnifying glass on the wall next to each "mouse invitation" that you find.

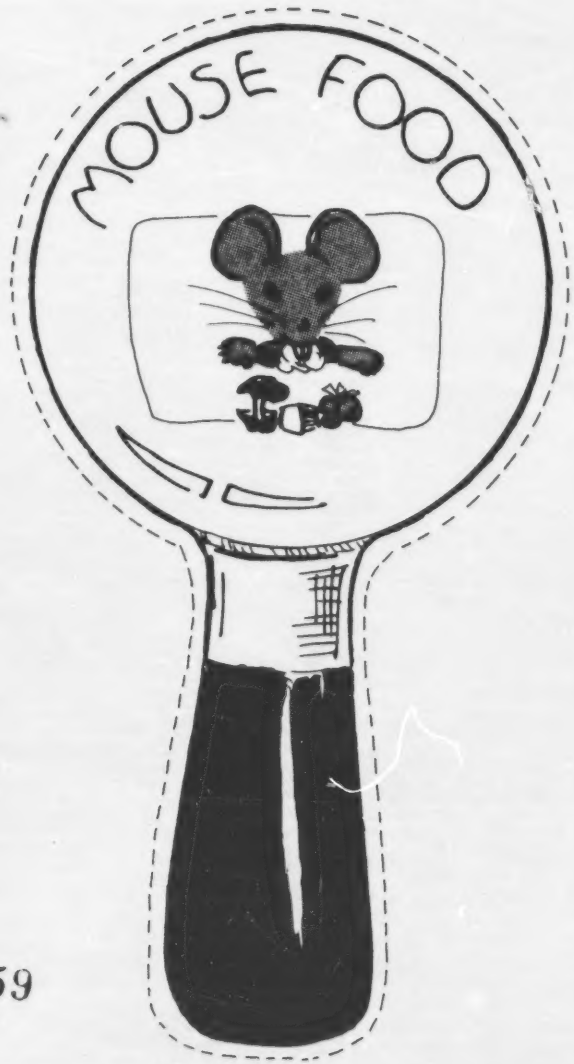
Note: Misunderstandings might be avoided if you discuss your plans with the chief custodian before proceeding. Perhaps he/she will be interested in accompanying your "sleuthers" as they search out and identify possible trouble spots!

* **Word Puzzles**
- The two puzzles encourage students to make use of words and concepts developed in the Take-Home Booklet.

- Distribute copies to the students to complete and color.
- Finished work can be displayed on the lower right hand corner of the Bulletin Board.

Magnifying Glasses

(To Be Cut Out & Taped By Students To Appropriate Places On School Tour).



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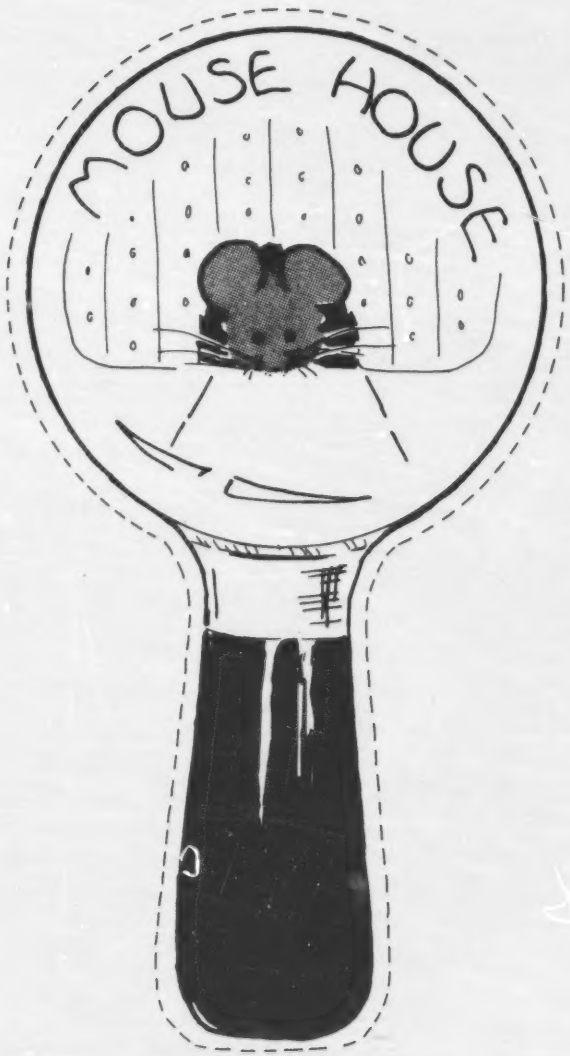

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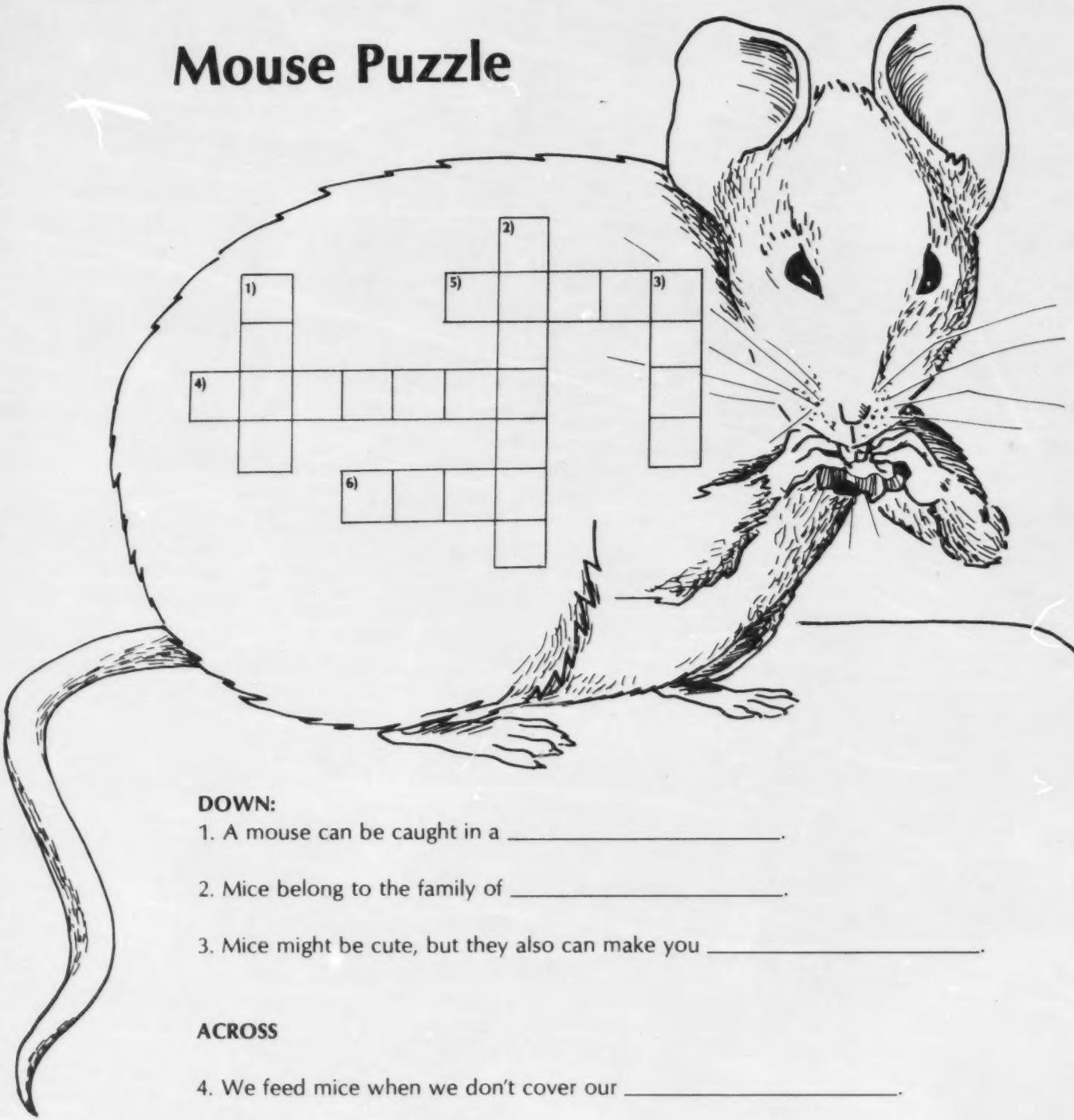
Mouse Puzzle



DOWN:

1. A mouse can be caught in a _____.

2. Mice belong to the family of _____.

3. Mice might be cute, but they also can make you _____.

ACROSS

4. We feed mice when we don't cover our _____.

5. They often get into our houses through _____.

6. An animal that "bugs" us is called a _____.

CHOOSE FROM THESE WORDS:

• garbage • sick • pest • trap • rodents • holes

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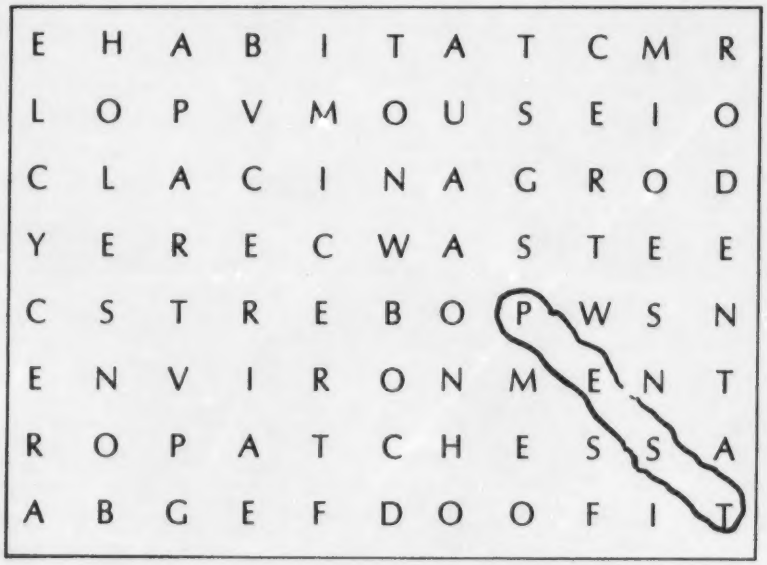
Mouse Puzzle

Find the words listed below in the puzzle. They can be circle horizontally, vertically, or diagonally, backward or forward. Check them off when you have found them. (The first word has already been done for you.)



E	H	A	B	I	T	A	T	C	M	R
L	O	P	V	M	O	U	S	E	I	O
C	L	A	C	I	N	A	G	R	O	D
Y	E	R	E	C	W	A	S	T	E	E
C	S	T	R	E	B	O	P	W	S	N
E	N	V	I	R	O	N	M	E	N	T
R	O	P	A	T	C	H	E	S	S	A
A	B	G	E	F	D	O	O	F	I	T

- ✓ pest
- __ environment
- __ recycle
- __ food
- __ habitat
- __ holes
- __ organic
- __ mouse
- __ garbage
- __ patch
- __ waste
- __ mice
- __ rodent
- __ trap

ORDER FORM

Name_____ Date _____

Address _____

_____

MOUSE MODULE MATERIALS:

Quantity	Item	Cost	Total
_____	Take-Home Booklets	_____	_____
_____	Bulletin Boards	_____	_____

COCKROACH MODULE MATERIALS:

_____	Basic Module (includes 8 Lessons, 1 Take-Home Booklet, Sample Poster)		
_____	Filmstrip	_____	_____
_____	Poster Tour	_____	_____
_____	Take-Home Booklets	_____	_____

Mail order and remittance to:

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